



X-Plain™ *Alopecia*

Reference Summary

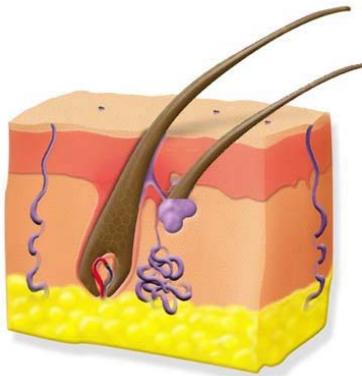
Hair loss is very common in both men and women. You or someone you love may be experiencing hair loss.

Learning about normal hair growth is very important in understanding hair loss.

This health information program will help you understand alopecia, the different types of hair loss, and their treatment options.

Anatomy

Hair is made of a chemical called keratin, the same material that fingernails and toenails are made of.



A specialized structure inside the skin called the papilla produces hair. A sac-like structure called the follicle surrounds the papilla and the rest of the hair root that is under the skin.

The shaft of the hair is on the outside of the body, sticking out of the skin.

The shaft has 3 layers.

- The cuticle—the outer layer.
- The cortex—the middle layer.
- The medulla—the center of the hair.

Hair color depends on different pigments in the cortex. As we grow older, pigment gradually stops being produced, resulting in gray or white hair.

We each have about 120,000 hairs on our scalp; blonde-haired people seem to have more than brown-haired and redheaded people.

Our entire body is covered with hair except for our lips, palms of the hands and soles of the feet. Hair that is very thin and hard to see is called vellus. An average person has about 5 MILLION hairs on his or her body!

Hair grows from the papilla in different phases. Depending on where it is on the body, the person's age and their medical condition, a strand of hair might grow for up to 5 years.

After growing for up to 5 years, a hair quits growing and goes into a resting phase for up to 12 weeks.

After the resting phase, hair falls out of the follicle and a new hair starts to grow. The cycle then repeats. Up to 100 scalp hairs per day may fall out.

Normal hair growth depends on a good blood supply to the papilla and a healthy body.

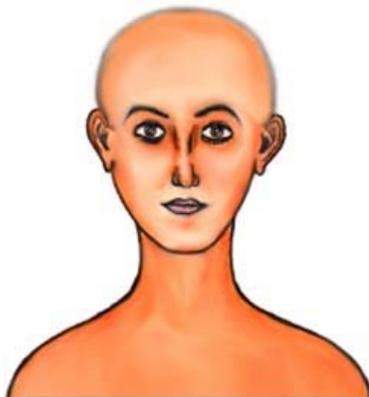
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Types & Causes

There are many different types of hair loss, or alopecia. The most common is baldness, which affects over 95% of people with hair loss.

Baldness is NOT actually hair loss. Hair is not lost, but instead it becomes very fine and colorless, reverting to vellus.

Common baldness is hereditary. It is also due to hormonal changes in the body, mainly higher levels of male hormones called androgens. Women also have androgens. Both men and women can get this type of baldness.



Hair loss can be due to different types of medications, such as chemotherapy, and medications taken for gout, arthritis, depression, hypertension and heart problems.

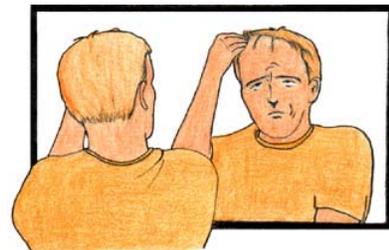
Vitamin A in large doses can also lead to hair loss. Stopping the medication that is causing hair loss usually allows the hair to grow back. However, this should be done under a doctor's supervision!

Birth control pills and pregnancy can lead to hair loss. This may last for up to 6 months after stopping birth control pills or after delivering the baby. Hair tends to grow back with no long-term problems.

Other conditions could lead to reversible hair loss including:

- thyroid problems
- low-protein diet
- low levels of iron in the blood (common in women with heavy menstrual cycles)
- diabetes
- lupus
- major surgery or chronic illness
- fungus infection of the scalp

Hair loss can also be due to hair pulling. Hair may be pulled purposefully due to nervousness or accidentally, such as with tightly braided hair. If the pulling stops, the hair will grow back.



Chemical and heat treatments on hair, such as coloring and perming, can weaken the hair and lead to hair loss. More than one shampoo per day and hard brushing can also lead to hair loss.

The immune system can also cause hair loss. The immune system helps defend the body from viruses, bacteria, and foreign substances. Sometimes the immune system mistakes hair follicles for a foreign substance and attacks them.

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If the immune system attacks hair follicles, patchy hair loss on the scalp, face, or other areas of the body may result. The patches are usually larger than a quarter in size. This condition is called alopecia areata.

In severe cases, hair ALL over the body is lost when the immune system attacks hair follicles. This is called alopecia universalis.

2% of the population will develop alopecia areata at some point in their lives. This type of alopecia is sometimes attributed to heredity. Hair may grow back on its own with no medical intervention.

Treatment

Treating common baldness is not very effective. A special lotion called minoxidil, applied twice a day, improves blood supply to the follicles and papillae. This can treat baldness slightly.

A pill called finasteride is also used to treat common baldness. Taken once a day, it blocks the effect of androgens on the hair follicles. This drug can lead to birth defects in pregnant women so women should NOT use it.

It sometimes takes months before lotions or pills produce any benefits.

Most specialists suggest baby shampoo for patients losing hair. Blow-drying is discouraged and patients with hair loss should comb hair after it dries. Wet hair is more fragile than dry hair.

Treatment for alopecia areata includes the use of steroids either by mouth, injection or as a topical ointment on the affected areas.

Minoxidil lotions or a tar-like substance called anthralin cream may help treat alopecia areata also.

In patients with more severe cases of alopecia areata or alopecia universalis, steroid pills may be prescribed.

Other treatment options are available for severe cases of alopecia areata or universalis. These include:

- Treatment with medications that suppress the immune system, such as cyclosporine
- Treating the skin with ultraviolet light after having giving the patient a special oral medication

Sometimes topical medications that cause an allergic reaction in the skin may be applied. These medications can jump start hair growth.

Treating alopecia depends on the underlying reason for the hair loss. For example, adding iron or protein to the diet could lead to hair regrowth.

In the cases where no medical treatments help, wigs and hair transplants may be considered.

Patients should protect exposed areas from sunburn by covering them or by using sunscreens.

In cases where the eyelashes and eyebrows are absent, eyeglasses can help protect the eyes from dust and debris.

Summary

Hair loss, or alopecia, can be a sign of serious diseases especially if the hair loss occurs rapidly. Effective treatment is possible for only a small number of patients. Some hair loss patients may have to accept baldness or cover it up with wigs or hair transplants.

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